

ABSTRACT OF THE DISCLOSURE

In a charge potential evaluation device, the measured value of a potential difference V_c in a charged plate monitor (CPM) is converted into a potential difference V_h between the conductive pattern and load beam in a head gimbal assembly (HGA), using the following expression (1),

$$[\text{Expression 1}] \quad V_h = \frac{d_h}{\epsilon_h} \cdot \frac{\epsilon_c}{d_c} V_c$$

where d_h denotes the distance between the conductive pattern and the load beam in the HGA, d_c denotes the distance between the conductive plate and a grounded surface in the CPM, ϵ_h denotes the relative permittivity of an insulating foundation layer in the HGA, and ϵ_c denotes the relative permittivity of the region between the conductive plate and the grounded surface in the CPM.